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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,009	11/20/2001	Jason F. Hunzinger	09752-141001	2435

27572 7590 07/01/2004

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EXAMINER	
PEACHES, RANDY	

ART UNIT	PAPER NUMBER
2686	4

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/990,009	HUNZINGER, JASON F.	
	Examiner	Art Unit	
	Randy Peaches	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-32 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. ***Claims 1-3, 5-12, 16-19, 21-28 and 32*** are rejected under 35 U.S.C. 102(b) as being anticipated by Weaver, Jr. et al (U.S. Patent Number 5,594,718).

Regarding ***claim 1***, Weaver, Jr. et al discloses a method of triggering handoff from a first wireless communication system comprising:

- detecting at least one pilot signal from a second wireless communication system of a different generation from said first wireless communication system. See columns 3,6, and 7 lines 32-39 lines 9-14 lines 21-23, respectively;

- measuring at least border base station, which reads on claimed "one target parameter", from said second wireless communication system. See column 7 lines 13-18;
- measuring at least one source parameter from said first wireless communication system. See column 7 lines 13-18;
- determining a threshold level. See column 7 lines 32-34; and
- detecting when said target parameter exceeds said source parameter by said threshold level. See column 7 line 14.

Regarding ***claim 2***, according to ***claim 1***, Weaver, Jr. et al further teaches of completing handoff to said second wireless communication system upon said detection. See column 7 lines 41-46.

Regarding ***claim 3***, according to ***claim 1***, Weaver, Jr. et al further teaches of adding said at least one pilot from said second wireless communication system to a Candidate set, which reads on claimed "active set". See column 7 lines 6-16.

Regarding ***claim 5***, according to ***claim 1***, Weaver, Jr. et al further teaches wherein at least one of the source parameter or target parameter is a pilot signal strength. See column 7 lines 15-17.

Regarding ***claim 6***, according to ***claim 1***, Weaver, Jr. et al further teaches of sending

instructions for completing a handoff. See column 7 lines 33-46.

Regarding ***claim 7***, according to ***claim 1***, Weaver, Jr. et al further teaches of completing a handoff autonomously. See column 7 lines 40-46.

Regarding ***claim 8***, according to ***claim 1***, Weaver, Jr. et al further teaches of determining a statistic of one or more of said at least one source parameter and said at least one target parameter. See column 7 lines 31-37.

Regarding ***claim 9***, according to ***claim 8***, Weaver, Jr. et al further teaches wherein determining the threshold level comprises computing the threshold level based on said statistic. See column 7 lines 31-37.

Regarding ***claim 10***, according to ***claim 1***, Weaver, Jr. et al further teaches wherein said threshold level is communicated to a mobile station from a base station. See column 7 lines 25-46.

Regarding ***claim 11***, according to ***claim 10***, Weaver, Jr. et al further wherein said communication of said threshold level is part of an inter-generation handoff message. See columns 5 and 6 lines 5-30, 67, lines 1-7.

Regarding ***claim 12***, according to ***claim 2***, Weaver, Jr. et al further teaches wherein a

handoff to said second wireless communication system occurs a predetermined time after said detection is made and remains true. See column 7 lines 30-32.

Regarding ***claim 16***, according to ***claim 1***, Weaver, Jr. et al further teaches wherein determining said threshold value comprises evaluating two or more pilot strengths. See column 2 lines 30-37.

Regarding ***claim 17***, Weaver, Jr. et al discloses a system for enabling handoff from a first wireless communication system to a second wireless communication system comprising:

- a first wireless communication system comprising a plurality of base stations which each transmit a signal. See column 4 lines 10-29;
- a second wireless communication system of a different generation than said first wireless communication system, comprising a plurality of base stations which each transmit a signal. See column 5 lines 5-30 and FIGURE 2;
- a mobile station which detects at least one pilot signal from said second wireless communication system, wherein the mobile station measures at least one target parameter from said second wireless communication system and at least one source parameter from said first wireless communication system, wherein the mobile station determines a threshold level and detects when said target parameter exceeds said source parameter by said threshold level. See column 7 lines 13-18 lines 32-34.

Regarding ***claim 18***, according to ***claim 17***, Weaver, Jr. et al further teaches wherein the mobile station completes handoff to said second wireless communication system upon said detection. See column 7 lines 41-46.

Regarding ***claim 19***, according to ***claim 17***, Weaver, Jr. et al further teaches wherein the mobile station add said at least one pilot from said second wireless communication system to a Candidate set, which reads on claimed "active set". See column 7 lines 6-16.

Regarding ***claim 21***, according to ***claim 17***, Weaver, Jr. et al further teaches wherein at least one of said source parameter or target parameter is a pilot signal strength. See column 7 lines 15-17.

Regarding ***claim 22***, according to ***claim 17***, Weaver, Jr. et al further wherein said mobile station receives instructions for handoff from a base station. See column 7 lines 40-44.

Regarding ***claim 23***, according to ***claim 17***, Weaver, Jr. et al further wherein said mobile station completes handoff autonomously. See column 7 lines 40-46.

Regarding ***claim 24***, according to ***claim 17***, Weaver, Jr. et al further wherein said

mobile station determines a statistic of one or more of said at least one source parameter and said at least one target parameter. See column 7 lines 31-37.

Regarding ***claim 25***, according to ***claim 24***, Weaver, Jr. et al further wherein said mobile station computes the threshold level based on said statistic. See column 7 lines 31-37.

Regarding ***claim 26***, according to ***claim 17***, Weaver, Jr. et al further teaches wherein said mobile station receives said threshold level from a base station. See column 7 lines 25-46.

Regarding ***claim 27***, according to ***claim 26***, Weaver, Jr. et al further teaches wherein said threshold level is part of an inter-generation handoff message. See columns 5 and 6 lines 5-30, 67, lines 1-7.

Regarding ***claim 28***, according to ***claim 17***, Weaver, Jr. et al further teaches wherein said mobile station hands off to said second wireless communication system after a predetermined time elapses since said detection is made and remains true. See column 7 lines 30-32.

Regarding ***claim 32***, according to ***claim 17***, Weaver, Jr. et al further teaches wherein said mobile station determines said threshold value by evaluating two or more pilot strengths.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. ***Claims 15 and 31*** rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver, Jr. et al (U.S. Patent Number 5,594,718) as applied to ***claims 1-3, 5-12, 16-19, 21-28 and 32*** above, and further in view of Soliman (U.S. Patent Number 6,321,090 B1).

Regarding ***claim 15***, according to ***claim 1***, Weaver, Jr. et al discloses a method of triggering handoff from a first wireless communication system comprising:

- detecting at least one pilot signal from a second wireless communication system of a different generation from said first wireless communication system. See columns 3,7, and 7 lines 32-39 lines 9-14 lines 21-23, respectively;
- measuring at least border base station, which reads on claimed "one target parameter", from said second wireless communication system. See column 7 lines 13-18;
- measuring at least one source parameter from said first wireless communication system. See column 7 lines 13-18;
- determining a threshold level. See column 7 lines 32-34; and

- detecting when said target parameter exceeds said source parameter by said threshold level. See column 7 line 14.

However, Weaver, Jr. et al. does not disclose wherein at least one of said source parameter or target parameter is a round-trip delay value.

Soliman teaches in column 16 lines 16-34, where the round trip delay (RTD) value is received by the wireless device as a parameter from the base station controller.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Weaver, Jr. et al (U.S. Patent Number 5,594,718) to include Soliman (U.S. Patent Number 6,321,090 B1) in order to utilize a comparing parameter to determine the necessity to perform a handover procedure.

Regarding ***claim 31***, according to ***claim 17***, Weaver, Jr. et al discloses a system for enabling handoff from a first wireless communication system to a second wireless communication system comprising:

- a first wireless communication system comprising a plurality of base stations which each transmit a signal. See column 4 lines 10-29;
- a second wireless communication system of a different generation than said first wireless communication system, comprising a plurality of base stations which each transmit a signal. See column 5 lines 5-30 and FIGURE 2;
- a mobile station which detects at least one pilot signal from said second wireless communication system, wherein the mobile station measures at least one target

parameter from said second wireless communication system and at least one source parameter from said first wireless communication system, wherein the mobile station determines a threshold level and detects when said target parameter exceeds said source parameter by said threshold level. See column 7 lines 13-18 lines 32-34.

However, Weaver, Jr. et al. does not disclose wherein at least one of said source parameter or target parameter is a round-trip delay value.

Soliman teaches in column 16 lines 16-34, where the round trip delay (RTD) value is received by the wireless device as a parameter from the base station controller.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Weaver, Jr. et al (U.S. Patent Number 5,594,718) to include Soliman (U.S. Patent Number 6,321,090 B1) in order to utilize a comparing parameter to determine the necessity to perform a handover procedure.

3. ***Claims 4 and 20*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver, Jr. et al (U.S. Patent Number 5,594,718) as applied to ***claims 1-3, 5-12, 16-19, 21-28 and 32*** above, and further in view of Soliman (U.S. Patent Number 6,055,428 B1).

Regarding ***claim 4***, according to ***claim 1***, Weaver, Jr. et al discloses a method of triggering handoff from a first wireless communication system comprising:

- detecting at least one pilot signal from a second wireless communication system of a different generation from said first wireless communication system. See columns 3,7, and 7 lines 32-39 lines 9-14 lines 21-23, respectively;
- measuring at least border base station, which reads on claimed "one target parameter", from said second wireless communication system. See column 7 lines 13-18;
- measuring at least one source parameter from said first wireless communication system. See column 7 lines 13-18;
- determining a threshold level. See column 7 lines 32-34; and
- detecting when said target parameter exceeds said source parameter by said threshold level. See column 7 line 14.

However, Weaver, Jr. et al. does not disclose where the threshold can be dynamically adjusted.

Soliman discloses in column 3 and 4 lines 65-67 lines 1-7 where the thresholds are able to by dynamically adjusted.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Weaver, Jr. et al (U.S. Patent Number 5,594,718) to include Soliman (U.S. Patent Number 6,055,428 B1) in order for the system to be able to adjust the threshold to prevent or allow a handover procedure to occur. Additionally, the flexibility in the dynamic adjusting of the threshold allows the system to adjust to the changes in transmission quality of different channels and therefore, efficiently handle the network resources better.

Regarding ***claim 20***, according to ***claim 17***, Weaver, Jr. et al discloses a system for enabling handoff from a first wireless communication system to a second wireless communication system comprising:

- a first wireless communication system comprising a plurality of base stations which each transmit a signal. See column 4 lines 10-29;
- a second wireless communication system of a different generation than said first wireless communication system, comprising a plurality of base stations which each transmit a signal. See column 5 lines 5-30 and FIGURE 2;
- a mobile station which detects at least one pilot signal from said second wireless communication system, wherein the mobile station measures at least one target parameter from said second wireless communication system and at least one source parameter from said first wireless communication system, wherein the mobile station determines a threshold level and detects when said target parameter exceeds said source parameter by said threshold level. See column 7 lines 13-18 lines 32-34.

However, Weaver, Jr. et al. does not disclose where the threshold can be dynamically adjusted.

Soliman discloses in column 3 and 4 lines 65-67 lines 1-7 where the thresholds are able to by dynamically adjusted.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Weaver, Jr. et al (U.S. Patent

Number 5,594,718) to include Soliman (U.S. Patent Number 6,055,428 B1) in order for the system to be able to adjust the threshold to prevent or allow a handover procedure to occur. Additionally, the flexibility in the dynamic adjusting of the threshold allows the system to adjust to the changes in transmission quality of different channels and therefore, efficiently handle the network resources better.

4. ***Claims 14 and 30*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver, Jr. et al (U.S. Patent Number 5,594,718) as applied to ***claims 1-3, 5-12, 16-19, 21-28 and 32*** above, and further in view of Jetzek (U.S. Patent Number 6,754,493 B1).

Regarding ***claim 14***, according to ***claim 1***, Weaver, Jr. et al discloses a method of triggering handoff from a first wireless communication system comprising:

- detecting at least one pilot signal from a second wireless communication system of a different generation from said first wireless communication system. See columns 3,7, and 7 lines 32-39 lines 9-14 lines 21-23, respectively;
- measuring at least border base station, which reads on claimed "one target parameter", from said second wireless communication system. See column 7 lines 13-18;
- measuring at least one source parameter from said first wireless communication system. See column 7 lines 13-18;
- determining a threshold level. See column 7 lines 32-34; and

- detecting when said target parameter exceeds said source parameter by said threshold level. See column 7 line 14.

However, Weaver, Jr. et al. does not disclose determining said threshold level comprises calculating said threshold value.

Jetzek teaches in column 7 lines 3-50, of a method to determine the threshold values of a system.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Weaver, Jr. et al (U.S. Patent Number 5,594,718) to include Jetzek (U.S. Patent Number 6,754,493 B1) in order for the system to be able to adjust the threshold to prevent or allow a handover procedure to occur. Additionally, the flexibility in the dynamic adjusting of the threshold allows the system to adjust to the changes in transmission quality of different channels and therefore, efficiently handle the network resources better.

Regarding ***claim 30***, according to ***claim 17***, Weaver, Jr. et al discloses a system for enabling handoff from a first wireless communication system to a second wireless communication system comprising:

- a first wireless communication system comprising a plurality of base stations which each transmit a signal. See column 4 lines 10-29;
- a second wireless communication system of a different generation than said first wireless communication system, comprising a plurality of base stations which each transmit a signal. See column 5 lines 5-30 and FIGURE 2;

- a mobile station which detects at least one pilot signal from said second wireless communication system, wherein the mobile station measures at least one target parameter from said second wireless communication system and at least one source parameter from said first wireless communication system, wherein the mobile station determines a threshold level and detects when said target parameter exceeds said source parameter by said threshold level. See column 7 lines 13-18 lines 32-34.

However, Weaver, Jr. et al. does not disclose determining said threshold level comprises calculating said threshold value.

Jetzek teaches in column 7 lines 3-50, of a method to determine the threshold values of a system.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Weaver, Jr. et al (U.S. Patent Number 5,594,718) to include Jetzek (U.S. Patent Number 6,754,493 B1) in order for the system to be able to adjust the threshold to prevent or allow a handover procedure to occur. Additionally, the flexibility in the dynamic adjusting of the threshold allows the system to adjust to the changes in transmission quality of different channels and therefore, efficiently handle the network resources better.

5. ***Claims 13 and 29*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver, Jr. et al (U.S. Patent Number 5,594,718) as applied to ***claims 1-3, 5-12, 16-19, 21-28 and 32*** above, and further in view of Shin (U.S. Patent Number 6,549,524 B1).

Regarding ***claims 13 and 29***, according to ***claim 12 and 28***, Weaver, Jr. et al further teaches wherein said mobile station hands off to said second wireless communication system after a predetermined time elapses since said detection is made and remains true. See column 7 lines 30-32. Additionally, Weaver, Jr. et al. discloses a method of triggering handoff from a first wireless communication system comprising:

- detecting at least one pilot signal from a second wireless communication system of a different generation from said first wireless communication system. See columns 3,7, and 7 lines 32-39 lines 9-14 lines 21-23, respectively;
- measuring at least border base station, which reads on claimed "one target parameter", from said second wireless communication system. See column 7 lines 13-18;
- measuring at least one source parameter from said first wireless communication system. See column 7 lines 13-18;
- determining a threshold level. See column 7 lines 32-34; and
- detecting when said target parameter exceeds said source parameter by said threshold level. See column 7 line 14.

- a mobile station which detects at least one pilot signal from said second wireless communication system, wherein the mobile station measures at least one target parameter from said second wireless communication system and at least one source parameter from said first wireless communication system, wherein the mobile station determines a threshold level and detects when said target parameter exceeds said source parameter by said threshold level. See column 7 lines 13-18 lines 32-34.

However, Weaver, Jr. et al. does not disclose where predetermined time for a handoff process is calculated based on the criteria stated above.

Shin teaches in column 4 lines 9-10 of deciding a point of time, which reads on claimed "predetermined time", to allow a hand off to occur. See column 9 and 10 line 20-30 lines 8-24.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Weaver, Jr. et al (U.S. Patent Number 5,594,718) to include Shin (U.S. Patent Number 6,549,524 B1) in order to increase the efficiency of the hand off time. The dynamic calculation of the said point of time will allow a smoother transition of signal from network to network.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy Peaches whose telephone number is (703) 305-8993. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Randy Peaches
June 24, 2004

Nguyen Vo
6-27-04

NGUYEN T. VO
PRIMARY EXAMINER